

CLAIMS

1. A method for archiving task information obtained from a data-warehousing environment comprising steps of:

a. obtaining changes in operational metadata from said data-warehousing

5 environment,

b. extracting task information from said operational metadata,

c. storing said extracted task information in a buffer,

d. refreshing said buffer with changes in said operational metadata, and

moving task information from said buffer to an archive.

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2. A method for archiving task information, as per claim 1, wherein said task is an extract, transform, load (ETL) task.

3. A method for archiving task information, as per claim 1, wherein said buffer is a staging table.

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4. A method for archiving task information, as per claim 1, wherein said changes in operational metadata are obtained via a trigger mechanism.

5. A method for archiving task information, as per claim 2, wherein said ETL task information comprises any of: ETL task execution statuses, run identification numbers, definitions, control flows, and execution schedules.
- 5      6. A method for archiving task information, as per claim 2, wherein said archive is queried to report any of: completed tasks, pending tasks, duration of execution, error codes and messages, scheduling problems, scheduling changes, overdue ETL task run schedules, and overdue ETL task misses.
- 10      7. A method for archiving task information, as per claim 7, wherein content of said archive is extracted from and stored in one or more tables.
8. A method for archiving task information, as per claim 7, wherein said tables indicate any of: ETL task errors, completed tasks, task temporary status, and task  
15      scheduled.
9. A method for archiving task information, as per claim 8, wherein said tables are queried to generate reports comprising any of: sequence of task executed in a process, last task executed, task or tasks failed, duration of execution of tasks in a  
20      process, task or tasks retried, and statistics associated with a task run or runs,

errors associated with failed tasks, tasks failing with a specified error, task run schedule, de-scheduled tasks, and tasks having a specified temporary status.

10. A method for capturing and recording task information obtained from a data-

5       warehousing environment comprising steps of:

- a. uniquely identifying each task within a run,
- b. selecting one or more of said uniquely identified tasks to monitor,
- c. capturing data-warehousing population activities dynamically by
  - i. obtaining operational metadata containing task information
  - 10       relevant to said selected task or tasks,
  - ii. calculating changes in operational metadata,
  - iii. storing results of said calculating step in a buffer, andmoving selected buffer data to an archive.

15       11. A method for capturing and recording task information, as per claim 10, wherein said task is an extract, transform, load (ETL) task.

12. A method for capturing and recording task information, as per claim 10, wherein said buffer is a staging table.

13. A method for capturing and recording task information, as per claim 10, wherein either one of a system or a user performs said selecting step.

14. A method for capturing and recording task information, as per claim 10, wherein  
5       said operational metadata and changes in operational metadata are obtained via a trigger mechanism.

15. A method for capturing and recording task information, as per claim 14, wherein  
10       said trigger mechanism is attached to said operational metadata and to said buffer.

16. A method for capturing and recording task information, as per claim 14, wherein  
15       said trigger mechanism attached to operational metadata is activated by either changes to said selected task in said operational metadata or by termination of said selected task.

17. A method for capturing and recording task information, as per claim 15,  
20       whereupon termination of said selected task; said task status information is extracted from said operational metadata, if said selected task terminates with a failure or warning status, then error messages associated with said selected task or tasks are also extracted from said operational metadata, and said extracted task information is transformed into a format necessary for storage in said buffer.

18. A method for capturing and recording task information, as per claim 10, wherein said buffer is a staging table.

5 19. A method for capturing and recording task information, as per claim 17, wherein upon termination of said selected task:

- a. said trigger mechanism attached to said operational metadata is activated,
- b. said buffer is refreshed with changes in said operational metadata before said trigger mechanism was activated,
- 10 c. said archive is emptied into a backup medium or media, and  
said buffer data relevant to said selected task is moved from said buffer to said archive.

20. A method for capturing and recording task information, as per claim 19, wherein  
15 the granularity of data moved from said buffer to said archive is variable.

21. A method for capturing and recording task information, as per claim 19, wherein refresh operations on said buffer occur in response to the activation of said trigger mechanisms attached to said operational metadata.

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22. A method for capturing and recording task information, as per claim 19, wherein said archive is queried to report any of: completed tasks, pending tasks, duration of execution, error codes and message, scheduling problems, scheduling changes, and overdue task runs, and overdue task misses.

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23. A method for capturing and recording task information, as per claim 18, wherein said backup step comprises: selecting archive data to backup, backing up said selected archive data, extracting said selected archive data from said archive, filtering said selected archive data from said archive, and moving to a table said  
10 filtered archive data.

24. A method for capturing and recording task information, as per claim 18, wherein said archive is backed up at configured intervals.

15 25. A method for capturing and recording task information, as per claim 19, wherein said buffer data to be backed up is associated with a current timestamp.

26. A method for capturing and recording task information, as per claim 25, wherein said current timestamp is utilized in backup restoration.

27. A method for capturing and recording task information, as per claim 23, wherein said tables indicate any of: tasks completed, task errors, task temporary statuses, and tasks scheduled.

5 28. A method for capturing and recording task information, as per claim 27, wherein said tables are queried to generate reports comprising any of: sequence of tasks executed in a process, last task executed, task or tasks failed, duration of execution of tasks in a process, task or tasks retried, and statistics associated with a task run or runs, errors associated with failed tasks, tasks failing with a specified  
10 error, task run schedule, de-scheduled tasks, and tasks having a specified temporary status.

29. A data-warehousing environment system for capturing and recording task information comprising:

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- a. task information extracted from operational metadata,
  - b. trigger mechanisms attached to said operational metadata,
  - c. staging table storing said task information,
  - d. trigger mechanisms attached to said staging table, and
  - e. an archive table storing task information from said staging table.

30. An article of manufacture comprising a computer usable medium having computer readable program code embodied therein which implements the archiving of task information obtained from a data-warehousing environment comprising modules to execute the steps of:

- 5           a. obtaining changes in operational metadata from said data-warehousing environment,
- b. extracting task information from said operational metadata,
- c. storing said extracted task information in a buffer,
- d. refreshing said buffer with changes in said operational metadata, and
- 10       moving task information from said buffer to an archive.

31. An article of manufacture, as per claim 30, wherein said task is an extract, transform, load (ETL) task.

15       32. An article of manufacture, as per 30, wherein said buffer is a staging table.

33. An article of manufacture, as per claim 30, wherein said medium further comprises computer readable program code obtaining changes in operational metadata via a trigger mechanism.



34. An article of manufacture, as per claim 31, wherein said ETL task information comprises any of: ETL task execution statuses, run identification numbers, definitions, control flows, and execution schedules.

5 35. An article of manufacture, as per claim 31, wherein said medium further comprises computer readable program code querying said archive to report any of: completed tasks, pending tasks, duration of execution, error codes and messages, scheduling problems, scheduling changes, overdue ETL task run schedules, and overdue ETL task misses.

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36. An article of manufacture, as per claim 35, wherein said medium further comprises computer readable program code extracting and storing content of said archive into one or more tables.

15 37. An article of manufacture, as per claim 36, wherein said tables indicate any of: ETL task errors, completed tasks, task temporary status, and task scheduled.

38. An article of manufacture, as per claim 37, wherein said medium further comprises computer readable program code querying said tables to generate reports comprising any of: sequence of task executed in a process, last task  
20 executed, task or tasks failed, duration of execution of tasks in a process, task or

tasks retried, and statistics associated with a task run or runs, errors associated with failed tasks, tasks failing with a specified error, task run schedule, de-scheduled tasks, and tasks having a specified temporary status.